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TOP SECRET

PRIORITY

Multi

OUT53906

P 112204Z
FM NPIC

1964 AUG 11 23 08Z

12 AUG 1964

[redacted]

AFSSO USAFE
AFSSO PACAF
[redacted]
CNO
[redacted]
OPCEN
YWQLAZC/AFSSO SAC
YWQLAZC/AFSSO ACIC
YWQLAZC/AFSSO FTD
ZEM

HFS // 25X1
~~OJS~~ 25X1
~~CIA~~
~~FWS~~ 25X1
~~AGL~~

T O P S E C R E T THIS IS A [redacted] Grace (F25X1

[redacted] RELEASABLE FROM SSO CHANNELS. SSOS PASS TO 25X1

APPROPRIATE TCOS. SAC FOR DOOR. CITE NPIC 2739.

SUBJECT: CAMERA INFOMATION FOR MISSION 1009-1.

A. THIS PHOTOGRAPHY INVOLVES THE USE OF EIGHT CAMERAS: TWO MAIN CAMERAS, FOUR HORIZON CAMERAS, A STELLAR CAMERA, AND AN INDEX CAMERA.

B. OPERATIONAL FOCAL LENGTHS (MM)

		HORIZON				
	MAIN	PORT	STARBOARD	STELLAR	INDEX
FWD UNIT	609.602	55.03	55.01	83.961	38.248
AFT UNIT	609.617	55.77	54.97		

C. LENS DISTORTION (PIN CUSHION) MM

		DEGREES						
(1)	MAIN LENS	3	2	1	0	359	358	357
	FWD UNIT	.007	.005	.002	.000	.001	.002	.003

[redacted] 25X1

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GROUP 1
Excluded from automatic downgrading and declassification

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AFT UNIT	.003	.002	.002	.000	.000	.002	.005

(2) HORIZON CAMERAS (MM)

			FWD		AFT	
			PORT	STARBOARD	PORT	STARBOARD
(RADIAL)	10 DEGREES	MINUS	.001	.001	.001	.001
	20 DEGREES	MINUS	.005	.001	.002	.001
(TANGENTIAL)	MAX. VECTOR	NA		.006	.002	.008

D. DEPRESSION ANGLES OF HORIZON CAMERAS RELATIVE TO NOMINAL MAIN CAMERA

	PORT	STARBOARD
FWD	14 DEGREES 49 MIN.	15 DEGREES 9.5 MIN.
AFT	14 DEGREES 59 MIN.	15 DEGREES 27.5 MIN.

E. CAMERA FILTER AND EXPOSURE DATA

	MAIN	HORIZON	STELLAR	INDEX
FILTER	WRATTEN 21	WRATTEN 25	NONE	WRATTEN 21
APERATURE	F 3.5	STARBOARD F 8.0 PORT F 6.8	F 1.8	F 4.5
SLIT WIDTH/EXPOSURE	0.200 INCH	1/100 SEC	2.0 SEC.	1/500 SEC.
FILM	SO 132	SO 132	SO 102	SO 130

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25X1

G. TIMING MARKS

FREQUENCY MARKS WILL APPEAR ON THE FILM AT A RATE OF 200 CYCLES PER SECOND.

H. CALIBRATED ANGLES OF CAMERAS

(1) CALIBRATED CONVERGENT ANGLE OF MAIN CAMERAS 29 DEGREES 55.17 MIN.

(2) CALIBRATED ANGLE BETWEEN STELLAR AND INDEX CAMERAS 89 DEGREES 56 MIN.

I. IMAGE MOTION COMPENSATION DATA

A. CYCLE RATE (CPS) AND GROUND ANGULAR VELOCITY (GAV IN RAD/SEC)

REF. LEVEL			AMPL LEVEL		
NO.	CPS.	GAV.	NO.	CPS.	GAV.
10	0.2795	0.0253	3	0.1658	0.0150
9	0.2925	0.0265	4	0.1523	0.0138

B. PASSES: REF. 10, AMPL. 3 : 1D1 ONLY.

REF. 9, AMPL. 4 : 6D1 THRU AND INCLUDING $49D_1$.

J. PROGRAM TIME DATA

PASS	CAMERA ON TIME (ZEBRA TIME) DAY HOUR MIN SEC	PROGRAM ON TIME UP RAMP (SEC)	PROGRAM DURATION (SEC)
1D1	06 00 45 39	2135	37

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6D1	06	08	13	41	1784	348
6D2	06	08	21	52	2275	158
7D1	06	09	48	48	2042	294
8D1	06	11	15	32	1841	179
8D2	06	11	19	09	2058	198
8D3	06	11	23	19	2308	82
9AE	06	12	29	53	861	53
9D1	06	12	49	13	2022	268
10D1	06	14	35	33	2961	83
17D1	07	01	14	03	3190	131
20D1	07	05	22	54	1804	114
20D2	07	05	29	08	2177	101
21D1	07	06	59	35	2165	76
21D2	07	07	01	29	2279	357
22D1	07	08	26	24	1935	303
23D1	07	09	56	49	1920	105
23D2	07	09	59	44	2096	86
23D3	07	10	02	00	2232	114
24D1	07	11	26	56	1889	257
24D2	07	11	31	49	2182	152
25AE	07	12	41	15	909	54
25D1	07	13	01	06	2100	117
30D1	07	20	41	17	2485	84

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37D1	08	07	07	50	2029	271
37D2	08	07	15	25	2484	232
38D1	08	08	39	19	2079	164
38D2	08	08	44	08	2368	114
39D1	08	10	10	48	2130	99
39D2	08	10	13	35	2297	203
40AE	08	11	21	53	958	54
40D1	08	11	41	11	2115	117
40D2	08	11	44	59	2343	115
41D1	08	13	13	10	2197	189
46D1	08	20	50	27	2438	83
47D1	08	22	21	37	2469	130
48A1	08	23	36	17	1482	113
49D1	09	01	14	43	1949	90

NOTE: DATA IS THE SAME FOR BOTH THE MASTER (FWD) AND SLAVE (AFT) UNITS.

K. TIME CORRELATION (MILLISECONDS)

PASS	SYSTEM TIME	CLOCK TIME	DIFFERENCE
9	45058.100	358634.201	MINUS 0.006
16	84744.257	398320.352	MINUS 0.003
25	45743.214	445719.306	MINUS 0.001
40	40982.397	527358.478	MINUS 0.010

T O P S E C R E T

/END OF MESSAGE/

(ABOVE MESSAGE ALSO PASSED [redacted] 25X1

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